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# Implementing a Case Ownership Model with Telephone Interviewers

Jamie Wescott • RTI International, Research Triangle Park, NC

## Introduction

In telephone studies, automated call-scheduling systems help to modulate interviewer effects and diversify contact attempts by using algorithms to ensure that cases receive an appropriate number of calls at optimal time points. When an automated call scheduler is not available, a case ownership model is an alternative approach for case management. In a case ownership model, telephone interviewers are each assigned a set of individual cases and use their judgment to determine how best to work the case, similar to how field interviewers work their caseloads. This paper will describe our experiences implementing a case ownership approach to telephone contacting on a national study of young adults.

## Background

For the present study, we obtained consent to collect high school transcripts for approximately 2,300 sample members as part of a national longitudinal study of young adults. The consent collection included hard-copy mailings, e-mails, and telephone calls to sample members and their parents or guardians.

A total of 1,648 sample members were eligible to receive outbound prompting calls to request consent for the transcript collection. Outbound prompting calls lasted approximately 8 weeks. Outbound telephone prompting was conducted using a case ownership model. In a **case ownership model**, interviewers are each assigned a set of individual cases and encouraged to use their judgment to determine how best to work the case.

### Benefits of the case ownership model

- Case management system is less costly and time consuming to develop than an automated call scheduler.

### Drawbacks to the approach

- There is less consistency and standardization of approach than would occur in a study with automated call scheduling.
- Additional case review is required to ensure that data collection methodologies are followed consistently.

## Implementation

### Role of the Interviewer

- Review their assigned cases
- Determine which of their assigned cases to call and when, which telephone numbers to attempt, and how often to schedule callbacks
- Gain cooperation from sample members or sample members' parents or guardians
- Administer a web-based consent form over the phone

### Case Management System (CMS)

We based our CMS on those used by institution-based data collections, which use a case ownership model. The system used a shared assignment approach: cases were assigned to a pair of interviewers who worked complementary shifts throughout the week.

The CMS included a report that was tailored for each interviewer, which included

- a list of all cases assigned to the interviewer;
- the date, time, and results of the most recent call attempt;
- the next appointment for the case; and
- the overall status of the case.

The CMS also included

- a list of all known contacts associated with each case (e.g., parents) and their contact information,
- an appointment feature for scheduling callbacks for specific dates and times,
- a contact history page that included a record of every contact attempt associated with the sample member,
- suggested call scripts,
- answers to frequently asked questions about the study, and
- a link to complete the web-based consent form.

### Interviewer Training

None of the interviewers had worked on a study that used the case ownership model; therefore, training emphasized case management skills:

- information about the background of the study,
- strategies for gaining cooperation,
- answers to frequently asked questions,
- how to launch and complete the web-based consent form,
- talking points and sample call scripts that covered several call scenarios, and
- hands-on sessions in which interviewers acted out scenarios and practiced gaining cooperation without reading from a screen.

## Results

Of the approximately 2,300 total cases included in the consent collection effort, 500 (21.6 percent) provided consent. Of these, 22 percent responded by returning the consent form by mail, 54 percent provided consent over the phone, and 23 percent completed the self-administered web consent form.

### Operational Observations

- Interviewers' responses were positive. They appreciated being able to work cases as they saw fit and enjoyed the challenge of case management.
- Interviewers were effective at establishing rapport with sample members.
- Case review was conducted to verify that cases were receiving a consistent and sufficient number of call attempts.
- Deliberate effort was required to check scheduled appointments at the beginning of each shift.

Figure 1. Outbound Call Count Distribution, by Response Status

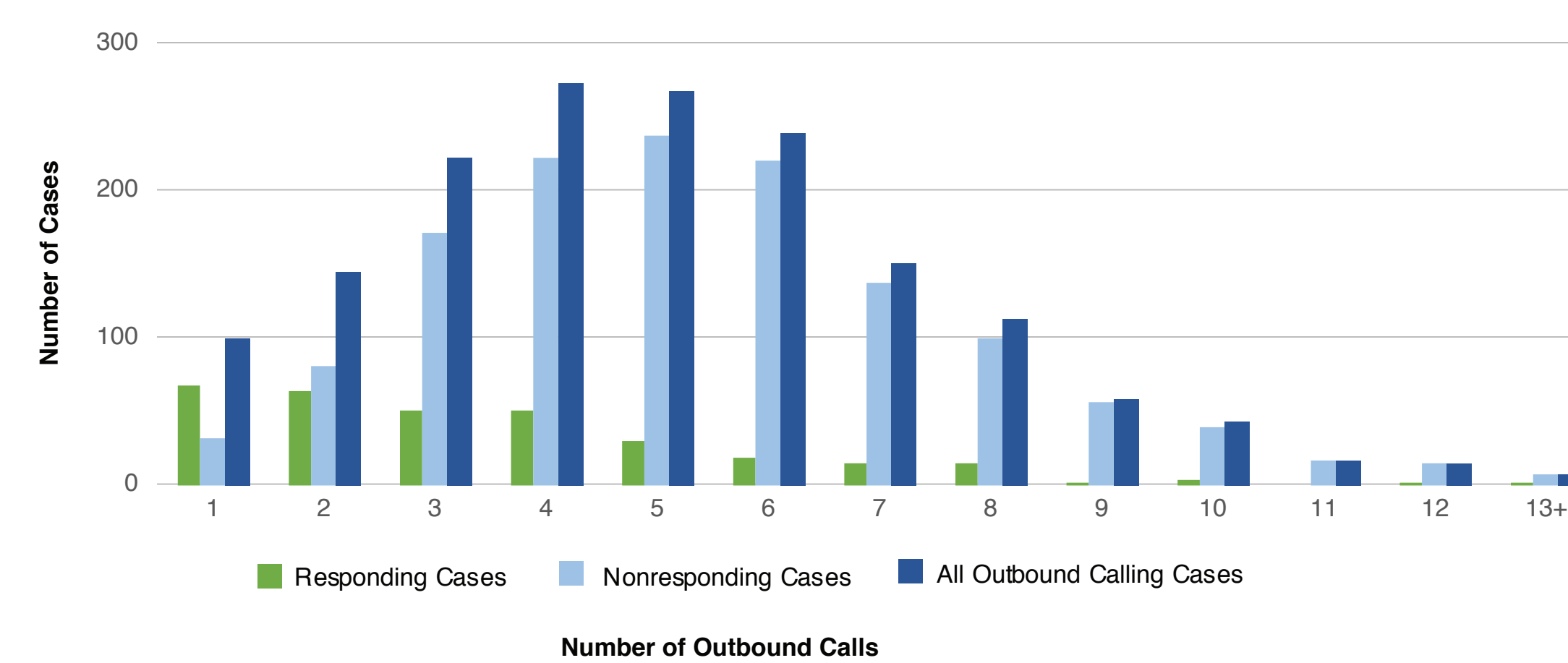
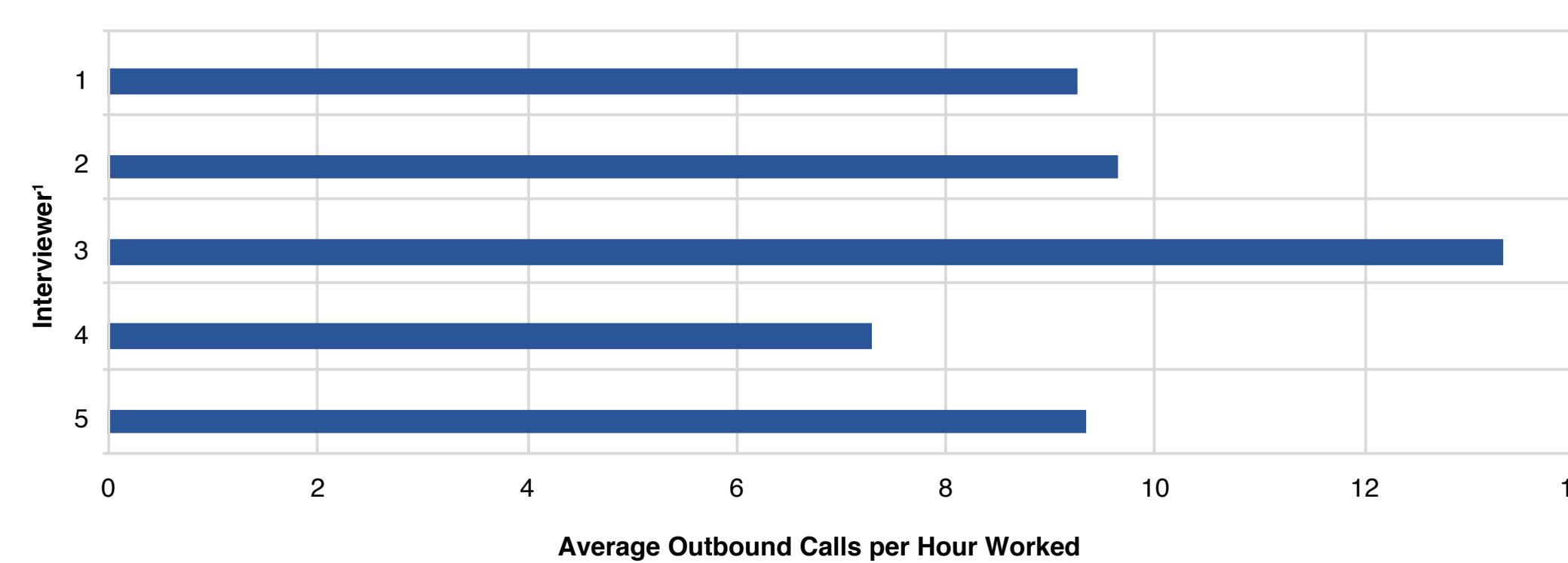


Figure 2. Average Number of Outbound Calls Per Hour Worked, by Interviewer



<sup>†</sup> Interviewers are sorted by hours worked, such that Interviewer 1 worked the most hours and Interviewer 5 worked the least number of hours. This analysis excludes one interviewer who worked fewer than 80 hours on the project.

Figure 3. Number of Calling Time Slots Attempted

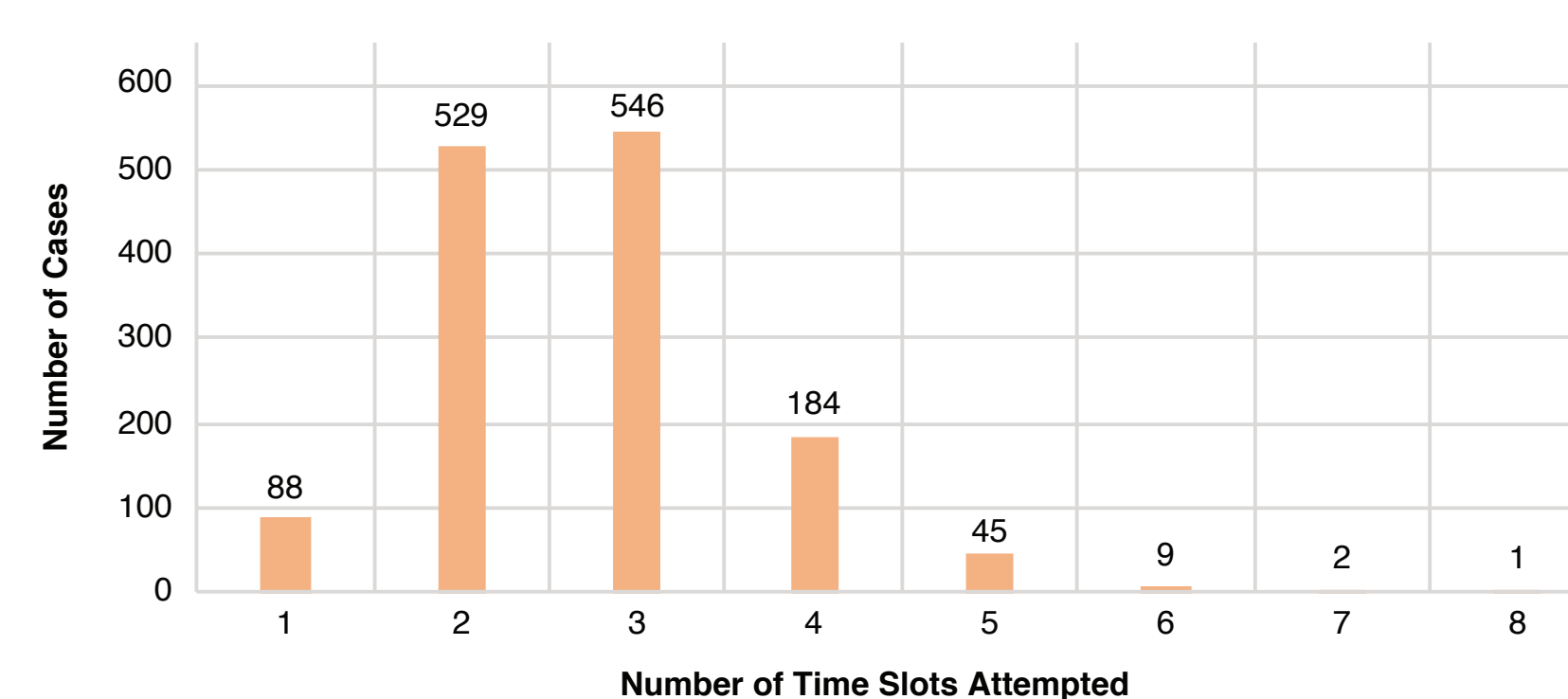
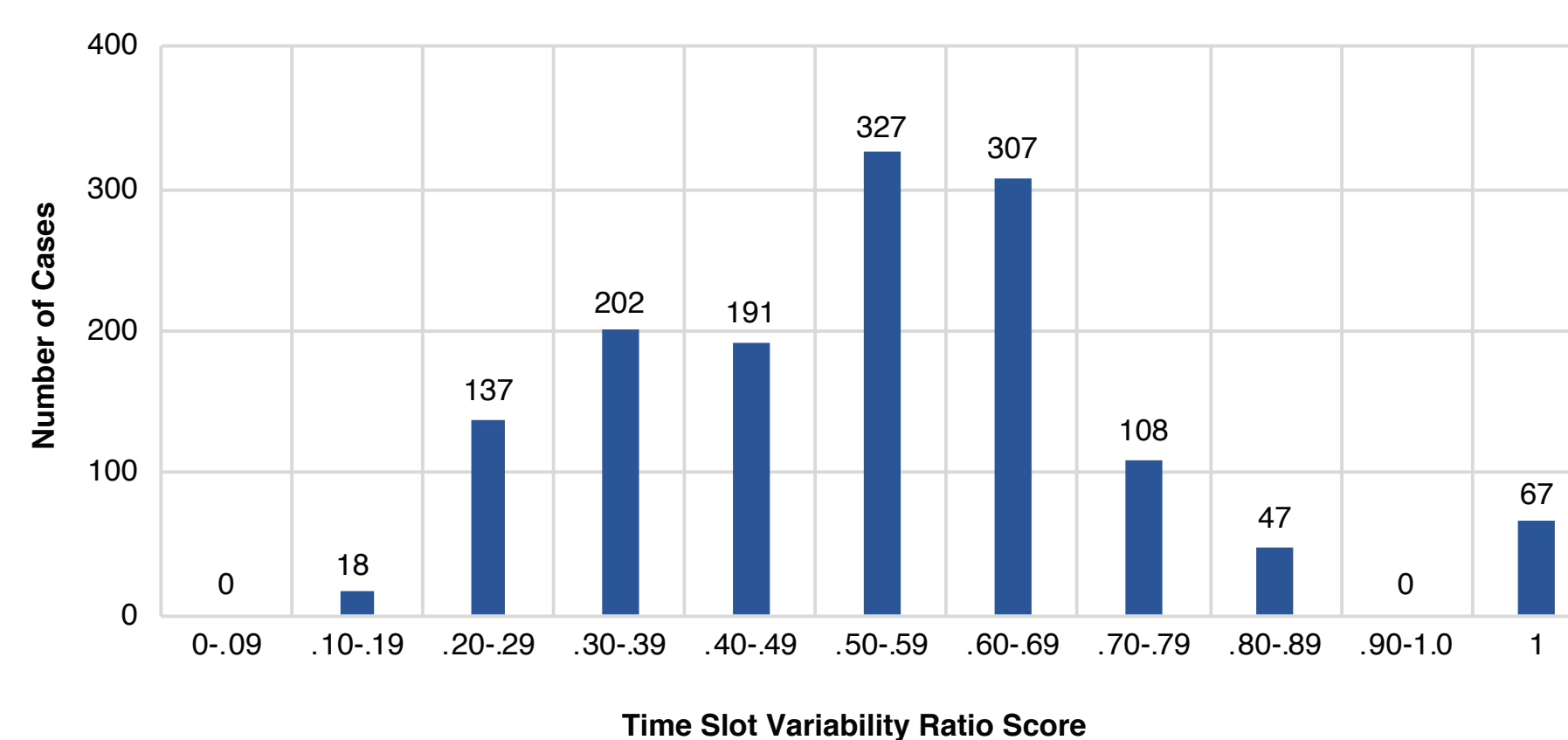


Figure 4. Time Slot Variability of Outbound Calls



### Analyses

#### 1) Consistency of Call Attempts

Among the outbound calling group, calls per case ranged from one call to 17 calls, with most sample members (nearly 61 percent) receiving between three and six outbound calls – a substantial spread, given the short data collection window.

Note the small group of nonrespondents who received very few calls: of the 1,331 nonrespondents, 283 (21.2 percent) received three or fewer calls over the 8-week collection period.

#### 2) Interviewer Productivity

There was considerable variation in the number of call attempts made by each interviewer, which ranged from 7.3 to 13.3 calls per hour worked.

#### 3) Variability of Call Attempts

There were 12 possible calling slots: dayshift (calls before 5:00 pm) and nightshift (calls after 5:00 pm) for Monday through Friday (10 total slots for weekdays), Saturday, and Sunday. Of the over 1,400 cases that received three or more call attempts, 44 percent of them received call attempts in only one or two time slots.

To account for the variability in call attempts, we created a simple variability ratio to examine the number of time slots dialed per call attempt:

$$\text{Variability ratio} = \frac{\text{Number of time slots dialed}}{\text{Number of total call attempts}}$$

The ratio is scaled from 0.00 (least variability) to 1.00 (greatest variability): cases with values closest to 1.00 are those that received call attempts during the widest range of time slots.

Observed results ranged from 0.13 to 1.00. Most sample members (61 percent) had scores of 0.50 or above; for this group, the time slot of outbound calls was duplicated for no more than 50 percent of calls.

## Conclusion

**1. We observed moderate inconsistency of call count distribution, interviewer productivity, and variation in the timing of call attempts.** These differences occurred despite efforts to train interviewers, review cases, and intervene throughout collection.

**2. While analysis of call data revealed inefficiencies in interviewers' case management skills, on balance, the design was effective for this collection.** The cost savings from using this approach allowed for a robust tracing, locating, and mailing effort, which ultimately may have had more positive impact on the response rate than automated call scheduling.

**3. The case ownership approach can be implemented successfully with rigorous analysis of paradata throughout data collection and with interventions to ensure that cases are worked consistently.** For larger studies, the labor costs associated with this review and manual intervention would likely outweigh system development savings.

**4. This analysis was a retrospective observational study; therefore, limited conclusions can be drawn regarding interviewers' impact on nonresponse error.** Future studies could use an experimental design to assess the extent to which interviewer variability in call timing and number of attempts affects the representativeness of the responding sample.

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